WELDING JOURNAL INDEX

VOLUME 63—1984

PUBLISHED BY THE AMERICAN WELDING SOCIETY, P.O. BOX 351040, Miami, FL 33135

Part 1—WELDING JOURNAL

SUBJECT INDEX

Aluminum Alloy 5052, Laser-GTA Welding of—T. P. Diebold and C. E. Albright, 18 to 24 (Jun).

*Aluminum Armor Weldments Earns Patent and Award, Test for—B. Lessels, 62 (Dec).

Aluminum, Effects of Contact Resistance in Resistance Welding of—U. D. Maliya, 41 to 44 (Feb).

*Aluminum Sports Tubing, High Frequency System Keys Switch from Seamless to Welded—49 (Aug).

Aluminum Spot Welds Observed by Electrical Measurements, Flaws in—R. L. Cohen and K. W. West, 21 to 23 (Aug).

Aluminum under Vacuum, Process Control Criteria for Brazing—W. L. Winterbottom, 33 to 39 (Oct).

Aluminum with Variable Polarity Power, Keyhole Plasma Arc Welding of—M. Tomsic and S. Barhorst, 25 to 32 (Feb).

American Workplace—Are We Ready? Welding Robots in the—J. Weber, P. Schmitt, and M. Bock, 23 to 33 (Nov).

Arc Control with Pulsed GMA Welding—W. G. Essers and M. R. M. Van Gompel, 26 to 32 (Jun).

Arc Strikes on Steels Used in Nuclear Construction, The Effects of—S. H. Van Malssen, 29 to 37 (Jul).

Arc Welding Robot—A Guide to Equipment and Features, Selecting Your First—J. Hanright, 40 to 45 (Nov).

*Arc Welding Robot Finds the Angle to Success at Crawler Plant—53 (Nov).

*Arc Welding System Boosts Tractor Assembly Production, Robotic—60 to 61 (Nov).

Attracting, Training and Qualifying NDT Personnel—R. L. Holdren, 18 to 20 (Aug).

*Auto Components, Temperature Indicating Crayons Ease Repair of High Strength Steel—52 (Apr).

*Automaker, Programmable Spot Welding Controls Assure Flexibility for—54 (Nov).

Automated GMAW Process, Components for the—A. H. Kuhne, B. Frassek, and G. Starke, 31 to 34 (Jan).

*Automatic Plasma Arc Hardfacing Smooths the Way for Valve Maker—63 (Jun).

*Automatic Shape Cutting Equipment, Steel Service Center Enters Computer Age With—57 to 58 (Jan).

*Auto Radiators, Improved Solder Alloy Enhances—J. W. Lane and D. T. Brennan, 41 to 45 (Oct).

*Auto Underbodies, Transport/Positioning Systems Speed Assembly of—56 to 57 (Nov).

*Battery Trays, Smallest Diameter Flux Cored Wire Passes Acid Test on—58 to 61 (Mar).

*Boat Yard, Welding Electrode Means Smooth Sailing for Florida—P. Schmitt, 48 (Oct).

Boiler Support Steel, Inspection of Fabricated—E. R. Holby, 25 to 38 (Aug).

Brazing Aluminum under Vacuum, Process Control Criteria for—W. L. Winterbottom, 33 to 39 (Oct).

Brazing and Soldering Machines, Short-Run, Multiple Product—C. A. Napor and A. G. Forbes, 23 to 25 (Oct).

Brazing Foils, Rapidly Solidified Copper-Phosphorus Base—A. Datta, A. Rabinkin, and D. Bose, 14 to 21 (Oct).

Brazing of Laser Beam Cut Stainless Steel, Nickel—J. R. Thyssen, 26 to 30 (Oct).

Brazing of Small Diameter Copper Wires to Laminated Copper Circuit Boards, Laser Beam—T. A. Jones and C. E. Albright, 34 to 47 (Dec).

Bridge Structures, Examination and Repair of—A.W. Pense, R. Dias, and J. W. Fisher, 19 to 25 (Apr).

*Bumper Production, Robot Goes the Distance in—50 (Nov).

Calculating Cooling Rates by Computer Programming—O. W. Blodgett, 19 to 34 (Mar).

Chemical Plant Piping Systems, Repair Welding of Refinery and—H. W. Ebert, 18 to 23 (Feb).

Clinch River Modular Steam Generator Tube-to-Tubesheet and Shell Closure Welding—D. P. Viri and W. F. Iceland, 18 to 21 (Jun).

Coaxial Arc Weld Pool Viewing for Process Monitoring and Control—R. W. Richardson, A. Gutow, R. A. Anderson, and D. F. Farson, 43 to 50 (Mar).

*Codes and Specifications, Welding and Inspection: Looking Beyond—R. Johnson, 62 (Mar).

*Collecting System's Unusual Design, Welding Fumes Controlled at Source by—55 to 56 (Jan).

*College Welding Department Survey Proves a Blueprint for the Future—L. Defreitas, 59 to 60 (Jun).

Components for the Automated GMAW Process—A. H. Kuhne, B. Frassek, and G. Starke, 31 to 34 (Jan).

*Computerized Plasma Arc Cutting Speeds Production of Sheet Metal Fittings—49 (Sep).

Computer Programming, Calculating Cooling Rates by—O. W. Blodgett, 19 to 34 (Mar).

*Computer To Solve Typical Layout Problems, Using The Business and Personal—R. E. Yates and C. Day, 46 to 47 (Feb).

*A Practical Welder article

WELDING JOURNAL INDEX

VOLUME 63—1984

PUBLISHED BY THE AMERICAN WELDING SOCIETY, P.O. BOX 351040, Miami, FL 33135

Part 1—WELDING JOURNAL

SUBJECT INDEX

Aluminum Alloy 5052, Laser-GTA Welding of—T. P. Diebold and C. E. Albright, 18 to 24 (Jun).

*Aluminum Armor Weldments Earns Patent and Award, Test for—B. Lessels, 62 (Dec).

Aluminum, Effects of Contact Resistance in Resistance Welding of—U. D. Maliya, 41 to 44 (Feb).

*Aluminum Sports Tubing, High Frequency System Keys Switch from Seamless to Welded—49 (Aug).

Aluminum Spot Welds Observed by Electrical Measurements, Flaws in—R. L. Cohen and K. W. West, 21 to 23 (Aug).

Aluminum under Vacuum, Process Control Criteria for Brazing—W. L. Winterbottom, 33 to 39 (Oct).

Aluminum with Variable Polarity Power, Keyhole Plasma Arc Welding of—M. Tomsic and S. Barhorst, 25 to 32 (Feb).

American Workplace—Are We Ready? Welding Robots in the—J. Weber, P. Schmitt, and M. Bock, 23 to 33 (Nov).

Arc Control with Pulsed GMA Welding—W. G. Essers and M. R. M. Van Gompel, 26 to 32 (Jun).

Arc Strikes on Steels Used in Nuclear Construction, The Effects of—S. H. Van Malssen, 29 to 37 (Jul).

Arc Welding Robot—A Guide to Equipment and Features, Selecting Your First—J. Hanright, 40 to 45 (Nov).

*Arc Welding Robot Finds the Angle to Success at Crawler Plant—53 (Nov).

*Arc Welding System Boosts Tractor Assembly Production, Robotic—60 to 61 (Nov).

Attracting, Training and Qualifying NDT Personnel—R. L. Holdren, 18 to 20 (Aug).

*Auto Components, Temperature Indicating Crayons Ease Repair of High Strength Steel—52 (Apr).

*Automaker, Programmable Spot Welding Controls Assure Flexibility for—54 (Nov).

Automated GMAW Process, Components for the—A. H. Kuhne, B. Frassek, and G. Starke, 31 to 34 (Jan).

*Automatic Plasma Arc Hardfacing Smooths the Way for Valve Maker—63 (Jun).

*Automatic Shape Cutting Equipment, Steel Service Center Enters Computer Age With—57 to 58 (Jan).

*Auto Radiators, Improved Solder Alloy Enhances—J. W. Lane and D. T. Brennan, 41 to 45 (Oct).

*Auto Underbodies, Transport/Positioning Systems Speed Assembly of—56 to 57 (Nov).

*Battery Trays, Smallest Diameter Flux Cored Wire Passes Acid Test on—58 to 61 (Mar).

*Boat Yard, Welding Electrode Means Smooth Sailing for Florida—P. Schmitt, 48 (Oct).

Boiler Support Steel, Inspection of Fabricated—E. R. Holby, 25 to 38 (Aug).

Brazing Aluminum under Vacuum, Process Control Criteria for—W. L. Winterbottom, 33 to 39 (Oct).

Brazing and Soldering Machines, Short-Run, Multiple Product—C. A. Napor and A. G. Forbes, 23 to 25 (Oct).

Brazing Foils, Rapidly Solidified Copper-Phosphorus Base—A. Datta, A. Rabinkin, and D. Bose, 14 to 21 (Oct).

Brazing of Laser Beam Cut Stainless Steel, Nickel—J. R. Thyssen, 26 to 30 (Oct).

Brazing of Small Diameter Copper Wires to Laminated Copper Circuit Boards, Laser Beam—T. A. Jones and C. E. Albright, 34 to 47 (Dec).

Bridge Structures, Examination and Repair of—A.W. Pense, R. Dias, and J. W. Fisher, 19 to 25 (Apr).

*Bumper Production, Robot Goes the Distance in—50 (Nov).

Calculating Cooling Rates by Computer Programming—O. W. Blodgett, 19 to 34 (Mar).

Chemical Plant Piping Systems, Repair Welding of Refinery and—H. W. Ebert, 18 to 23 (Feb).

Clinch River Modular Steam Generator Tube-to-Tubesheet and Shell Closure Welding—D. P. Viri and W. F. Iceland, 18 to 21 (Jun).

Coaxial Arc Weld Pool Viewing for Process Monitoring and Control—R. W. Richardson, A. Gutow, R. A. Anderson, and D. F. Farson, 43 to 50 (Mar).

*Codes and Specifications, Welding and Inspection: Looking Beyond—R. Johnson, 62 (Mar).

*Collecting System's Unusual Design, Welding Fumes Controlled at Source by—55 to 56 (Jan).

*College Welding Department Survey Proves a Blueprint for the Future—L. Defreitas, 59 to 60 (Jun).

Components for the Automated GMAW Process—A. H. Kuhne, B. Frassek, and G. Starke, 31 to 34 (Jan).

*Computerized Plasma Arc Cutting Speeds Production of Sheet Metal Fittings—49 (Sep).

Computer Programming, Calculating Cooling Rates by—O. W. Blodgett, 19 to 34 (Mar).

*Computer To Solve Typical Layout Problems, Using The Business and Personal—R. E. Yates and C. Day, 46 to 47 (Feb).

*A Practical Welder article

*Consumable Spacer Simplifies GTAW Pipe Welding—R. W. Von Ahrens, 55 (Jul).
Cooling Rates by Computer Programming, Calculating—O. W. Blodgett, 19 to 34 (Mar).
Copper-Phosphorus Base Brazing Foils, Rapidly Solidified—A. Datta, A. Rabinkin, and D. Bose, 14 to 21 (Oct).
Cracking in Thick Sections of Austenitic Stainless Steels—Part I, Heat-Affected Zone—R. D. Thomas, Jr., 24 to 32 (Dec).
*Crayons Ease Repair of High Strength Steel Auto Components, Temperature Indicating—52 (Apr).

*Dock Repair Demands Extensive Hyperbaric Welding, Underwater—54 (Aug).

Eddy Current Testing of Welded Tubing, Production—B. Roberts, 41 to 44 (Aug).
Effects of Arc Strikes on Steels Used in Nuclear Construction—S. H. Van Malssen, 29 to 37 (Jul).
Effects of Contact Resistance in Resistance Welding of Aluminum—U. D. Mallya, 41 to 44 (Feb).
*Electrode Means Smooth Sailing for Florida Boat Yard, Welding—P. Schmitt, 48 (Oct).
Electrodes at Extended Exposure Times, Evaluation of Moisture-Resistant E70XX—L. P. Earvolino, 36 to 38 (Mar).
*Electrode Saves Washing Machine Production Time, Metal Powder Continuous—53 to 54 (Jan).
*Electrode's Low Temperature Strength Buoys Geophysical Vibrators—49 to 50 (Feb).
*Electron Beam Welding—Application and Equipment Improvements—J. Powers, 39 to 40 (May).
*Electron Beam Welding, Jet Engine Blade Rejects Nosedive Under—47 to 48 (Sep).
*Electron Beam Welding On the Mark for Specialty Motor Designer—64 (Jun).
Electron Beam Welding, The Origin and Effects of Magnetic Fields in—P. J. Blakeley and A. Sanderson, 42 to 49 (Jan).
Electroslag Welding, High Speed—F. Eichhorn, J. Remmel, and B. Wübbels, 37 to 41 (Jan).
*End Mills' Cutting Edge, Robotics Maintains—50 to 51 (Apr).
*Engine Blade Rejects Nosedive Under Electron Beam Welding, Jet—47 to 48 (Sep).
Evaluation of Moisture-Resistant E70XX Electrodes at Extended Exposure Times—L. P. Earvolino, 36 to 38 (Mar).
Examination and Repair of Bridge Structures—A. W. Pense, R. Dias, and J. W. Fisher, 19 to 25 (Apr).
*Extinguishers Combat Welding Fires, Various—A. W. Krulee, 46 to 47 (Oct).

Fabrication of a Tantalum Neutral Source Heat Exchanger—R. D. Dixon, H. M. Crane, T. L. Crisler, and V. Vigil, 43 to 44 (Apr).
Factory-of-the-Future, Robotic Welding in the—J. Lee, 35 to 37 (Nov).
*FCAW Speeds High-Rise Construction, Self-Shielded—47 to 49 (Apr).
Field Heat Treatment of Small Diameter Carbon Steel Valves—J. I. Danis, 29 to 30 (May).
Flaws in Aluminum Spot Welds Observed by Electrical Measurements—R. L. Cohen and K. W. West, 21 to 23 (Aug).
*Flux Cored Wire Passes Acid Test on Battery Trays, Smallest Diameter—58 to 61 (Mar).
Four-Pole Oscillation, Reducing Hot-Short Cracking in Iridium GTA Welds Using—J. D. Scarbrough and C. E. Burgan (Jun).

*Fumes Controlled at Source by Collecting System's Unusual Design, Welding—55 to 56 (Jan).

*Gas Metal Arc Welding?, How Difficult Is It to Learn—M. J. Gellerman, 41 (May).
*Geophysical Vibrators, Electrode's Low Temperature Strength Buoys—49 to 50 (Feb).
GMA Spot Welding of Copper-Nickel to Steel, Pulsed—L. W. Sandor, 35 to 50 (Jun).
GMA Welding, Arc Control with Pulsed—W. G. Essers and M. R. M. Van Gompel, 26 to 32 (Jun).
GMAW Process, Components for the Automated—A. H. Kuhne, B. Frassek, and G. Starke, 31 to 34 (Jan).
GTA Welding of Aluminum Alloy 5052, Laser—T. P. Diebold and C. E. Albright, 18 to 24 (Jun).
*GTA Welding on Desert Pipeline Project, Teamwork Tests Automatic—D. C. Ellis, 53 to 54 (Jul).
GTA Welds Using Four-Pole Oscillation, Reducing Hot-Short Cracking in Iridium—J. D. Scarbrough and C. E. Burgan, 54 to 56 (Jun).
*GTAW Pipe Welding, Consumable Spacer Simplifies—R. W. Von Ahrens, 55 (Jul).

*Hardfacing Smooths the Way for Valve Maker, Automatic Plasma—63 (Jun).
Health Standards and Regulations, Welding—O. J. Fisher, 21 to 24 (Sep).
Heat-Affected Zone Cracking in Thick Sections of Austenitic Stainless Steels—Part I—R. D. Thomas, Jr., 24 to 32 (Dec).
Heat Exchanger, Fabrication of a Tantalum Neutral Source—R. D. Dixon, H. M. Crane, T. L. Crisler, and V. Vigil, 43 to 44 (Apr).
Heat Treatment of Small Diameter Carbon Steel Valves, Field—J. I. Danis, 29 to 30 (May).
High Capacity Robots in Demanding Resistance Welding Applications—J. S. Messer, 46 to 49 (Nov).
*High Frequency System Keys Switch from Seamless to Welded Aluminum Sports Tubing—49 (Aug).
*High Frequency Welded Beams, Strong, Lightweight Ship Panels Fabricated from—43 (May).
High Speed Electroslag Welding—F. Eichhorn, J. Remmel, and B. Wübbels, 37 to 41 (Jan).
*High Strength Steel Auto Components, Temperature Indicating Crayons Ease Repair of—52 (Apr).
Homopolar Pulse Upset Welding of API X-60 High Strength Line Pipe—T. A. Aanstoos and J. M. Weldon, 23 to 28 (Jul).
Hot-Short Cracking in Iridium GTA Welds Using Four-Pole Oscillation, Reducing—J. D. Scarbrough and C. E. Burgan, 54 to 56 (Jun).
*How Difficult Is It to Learn Gas Metal Arc Welding?—M. J. Gellerman, 41 (May).
How Plasma Arc Cutting Gases Affect Productivity—W. S. Severance and D. G. Anderson, 35 to 39 (Feb).
*Hydraulics Save Time by Preventing Inaccurate Bends—35 (Feb).
*Hyperbaric Welding, Underwater Dock Repair Demands Extensive—54 (Aug).

*Improved Solder Alloy Enhances Auto Radiators—J. W. Lane and D. T. Brennan, 41 to 45 (Oct).
Improving Welder Performance through Management Quality Teams—E. G. Hornberger and W. B. Flowers, 17 to 19 (Sep).
*Industrial Robotics and the Japanese Market: A Primer—62 to 63 (Nov).
*Inspection: Looking Beyond Codes and Specifications, Welding and—R. Johnson, 62 (Mar).

A Practical Welder article

Inspection of Fabricated Boiler Support Steel—E. R. Holby, 25 to 38 (Aug).
Inspection of Welds, Underwater Magnetic Particle—W. C. Chedister, 24 to 26 (May).

*Japanese Market: A Primer, Industrial Robotics and the—62 to 63 (Nov).
*Jet Engine Blade Rejects Nosedive Under Electron Beam Welding—47 to 48 (Sep).
*Jet Engine Parts, Precision Buildup Method Draws A Bead on Condemned—M. Tecklenburg, 51 to 52 (Jul).

Keyhole Plasma Arc Welding of Aluminum with Variable Polarity Power—M. Tomsic and S. Barhorst, 25 to 32 (Feb).

Laser Beam Brazing on Small Diameter Copper Wires to Laminated Copper Circuit Boards—T. A. Jones and C. E. Albright, 34 to 47 (Dec).
Laser Beam Cut Stainless Steel, Nickel Brazing of—J. R. Thyssen, 26 to 30 (Oct).
Laser Beam Welds, Mechanical Properties of—E. A. Metzbower, P. E. Denney, F. W. Fraser and D. W. Moon, 39 to 43 (Jul).
Laser-GTA Welding of Aluminum Alloy 5052—T. P. Diebold and C. E. Albright, 18 to 24 (Jun).
*Lift Crane Boom, Weld Metal Stretches With—44 to 45 (Sep).
Line Pipe, Homopolar Pulse Upset Welding of API X-60 High Strength—T. A. Aanstoos and J. M. Weldon, 23 to 28 (Jul).

Magnetic Fields in Electron Beam Welding, The Origin and Effects of—P. J. Blakeley and A. Sanderson, 42 to 49 (Jan).
Magnetic Particle Inspection of Welds, Underwater—W. C. Chedister, 24 to 26 (May).
*Material Planning System to Reduce Inventory, Welding Equipment Firm Uses New—55 to 56 (Feb).
Mechanical Properties of Laser Beam Welds—E. A. Metzbower, P. E. Denney, F. W. Fraser and D. W. Moon, 39 to 43 (Jul).
*Metal Powder Continuous Electrode Saves Washing Machine Production Time—53 to 54 (Jan).
Microtracking of Edge Welds on Welded Metal Bellows, Optical—R. R. Larsen, 19 to 23 (May).
*Minnesota Welder Builds Mini-Sub for Great Lakes Shipwreck Venture—J. Weber, 57 to 59 (Dec).
*Motor Designer, Electron Beam Welding On The Mark for Specialty—64 (Jun).

NDT Personnel, Attracting, Training and Qualifying—R. L. Holdren, 18 to 20 (Aug).
Nickel Brazing of Laser Beam Cut Stainless Steel—J. R. Thyssen, 26 to 30 (Oct).
Nuclear Construction, The Effects of Arc Strikes on Steels Used in—S. H. Van Maissen, 29 to 37 (Jul).

Optical Microtracking of Edge Welds on Welded Metal Bellows—R. R. Larsen, 19 to 23 (May).
Origin and Effects of Magnetic Fields in Electron Beam Welding, The—P. J. Blakeley and A. Sanderson, 42 to 49 (Jan).

Performance of Ship Structural Details—C. R. Jordan and R. P. Krumpen, Jr., 18 to 28 (Jan).
*Pipeline Project, Teamwork Tests Automatic GTA Welding on Desert—D. C. Ellis, 53 to 54 (Jul).
*Pipe Welding, Consumable Spacer Simplifies GTAW—R. W. Von Ahrens, 55 (Jul).
Pipe, Welding Installation of A120-A53 Steel—H. A. Sosnin, 28 to 31 (Apr).
Piping Systems, Repair Welding of Refinery and Chemical Plant—H. W. Ebert, 18 to 23 (Feb).
Plasma Arc Cutting Gases Affect Productivity, How—W. S. Severance and D. G. Anderson, 35 to 39 (Feb).
*Plasma Arc Cutting Speeds Production of Sheet Metal Fittings—49 (Sep).
*Plasma Arc Hardfacing Smooths the Way for Valve Maker, Automatic—63 (Jun).
Plasma Arc Welding of Aluminum with Variable Polarity Power, Keyhole—M. Tomsic and S. Barhorst, 25 to 32 (Feb).
Plasma Arc Welding on the Space Shuttle External Tank, Variable Polarity—A. C. Nunes, Jr., E. O. Bayless, Jr., C. S. Jones III, P. M. Munafo, A. P. Biddle, and W. A. Wilson, 27 to 35 (Sep).
*Positioning Systems Speed Assembly of Auto Underbodies, Transport/—56 to 57 (Nov).
*Precision Buildup Method Draws A Bead on Condemned Jet Engine Parts—M. Tecklenburg, 51 to 52 (Jul).
Process Control Criteria for Brazing Aluminum under Vacuum—W. L. Winterbottom, 33 to 39 (Oct).
Process Monitoring and Control, Coaxial Arc Weld Pool Viewing for—R. W. Richardson, A. Gutow, R. A. Anderson, and D. F. Farson, 43 to 50 (Mar).
Production Eddy Current Testing of Welded Tubing—B. Roberts, 41 to 44 (Aug).
Productivity, How Plasma Arc Cutting Gases Affect—W. S. Severance and D. G. Anderson, 35 to 39 (Feb).
*Programmable Spot Welding Controls Assure Flexibility for Automaker—54 (Nov).
Pulsed GMA Spot Welding of Copper-Nickel to Steel—L. W. Sandor, 35 to 50 (Jun).
Pulsed GMA Welding, Arc Control with—W. G. Essers and M. R. M. Van Gompel, 26 to 32 (Jun).

Qualifying NDT Personnel, Attracting, Training and—R. L. Holdren, 18 to 20 (Aug).
Quality Teams, Improving Welder Performance through Management—E. G. Hornberger and W. B. Flowers, 17 to 19 (Sep).

*Railroad Repair Shop, Three-D Vision-Guided Robotic Welding System Aids—D. Lacoe and L. Seibert, 53 to 56 (Mar).
Rapidly Solidified Copper-Phosphorus Base Brazing Foils—A. Datta, A Rabinkin, and D. Bose, 14 to 21 (Oct).
*'Real Time' Weld Quality Monitor Locates Defects as They Happen—50 (Aug).
Reduced Fillet Weld Sizes for Naval Ships—R. P. Krumpen, Jr., 34 to 41 (Apr).
Reducing Hot-Short Cracking in Iridium GTA Welds Using Four-Pole Oscillation—J. D. Scarbrough and C. E. Burgan, 54 to 56 (Jun).
Refinery and Chemical Plant Piping Systems, Repair Welding of—H. W. Ebert, 18 to 23 (Feb).
Repair of Bridge Structures, Examination and—A. W. Pense, R. Dias, and J. W. Fisher, 19 to 25 (Apr).
Repair Welding of Refinery and Chemical Plant Piping Systems—H. W. Ebert, 18 to 23 (Feb).
Resistance Welding Applications, High Capacity Robots in Demanding—J. S. Messer, 46 to 49 (Nov).
Resistance Welding of Aluminum, Effects of Contact Resistance in—U. D. Mallya, 41 to 44 (Feb).
Robot—A Guide to Equipment and Features, Selecting Your

*A Practical Welder article

First Arc Welding – J. Hanright, 40 to 45 (Nov).
*Robot Finds the Angle to Success at Crawler Plant, Arc Welding – 53 (Nov).
*Robot Goes the Distance in Bumper Production – 50 (Nov).
*Robotic Arc Welding System Boosts Tractor Assembly Production – 60 to 61 (Nov).
*Robotics and the Japanese Market: A Primer, Industrial – 62 to 63 (Nov).
*Robotics Halves Welding Time for Heavy Equipment Manufacturer – R. Kraicinski, 58 to 59 (Nov).
*Robotics Maintains End Mills' Cutting Edge – 50 to 51 (Apr).
Robotic Welding in the Factory-of-the-Future – J. Lee, 35 to 37 (Nov).
*Robotic Welding System Aids Railroad Repair Shop, Three-D Vision-Guided – D. Lacoe and L. Seibert, 53 to 56 (Mar).
*Robot Produces Flexible Manufacturing System, Track-Mounted Welding – 64 (Dec).
Robots in Demanding Resistance Welding Applications, High Capacity – J. S. Messer, 46 to 49 (Nov).
Robots in the American Workplace – Are we Ready? Welding – J. Weber, P. Schmitt, and M. Bock, 23 to 33 (Nov).

*Sculptor Flies His Colors Welding 'The King of Birds,' Utah – P. Schmitt, 47 to 49 (Jul).
Selecting Your First Arc Welding Robot – A Guide to Equipment and Features – J. Hanright, 40 to 45 (Nov).
*Self-Shielded FCAW Speeds High-Rise Construction – 47 to 49 (Apr).
*Shear Strength Data Provided by Tests at R & D Center, Soldered Alloy – 51 (Feb).
*Sheet Metal Fittings, Computerized Plasma Arc Cutting Speeds Production of – 49 (Sep).
Shell Closure Welding, Clinch River Modular Steam Generator Tube-to-Tubesheet and – D. P. Viri and W. F. Iceland, 18 to 21 (Jul).
*Ship Panels Fabricated from High Frequency Welded Beams, Strong, Lightweight – 43 (May).
Ship Structural Details, Performance of – C. R. Jordan and R. P. Krumpen, Jr., 18 to 28 (Jan).
Short-Run, Multiple Product Brazing and Soldering Machines – C. A. Napor and A. G. Forbes, 23 to 25 (Oct).
*Smallest Diameter Flux Cored Wire Passes Acid Test on Battery Trays – 58 to 61 (Mar).
*Solder Alloy Enhances Auto Radiators, Improved – J. W. Lane and D. T. Brennan, 41 to 45 (Oct).
*Soldered Alloy Shear Strength Data Provided by Tests at R & D Center – 51 (Feb).
Soldering Machines, Short-Run, Multiple Products Brazing and – C. A. Napor and A. G. Forbes, 23 to 25 (Oct).
Space Shuttle External Tank, Variable Polarity Plasma Arc Welding on the – A. C. Nunes, Jr., E. O. Bayless, Jr., C. S. Jones III, P. M. Munafo, A. P. Biddle, and W. A. Wilson, 27 to 35 (Sep).
*Specifications, Welding and Inspection: Looking Beyond Codes and – R. Johnson, 62 (Mar).
*Spot Welding Controls Assure Flexibility for Automaker, Programmable – 54 (Nov).
Spot Welding of Copper-Nickel to Steel, Pulsed GMA – L. W. Sandor, 35 to 50 (Jun).
Spot Welds Observed by Electrical Measurements, Flaws in Aluminum – R. L. Cohen and K. W. West, 21 to 23 (Aug).
Spot Weld Strength Determined from Simple Electrical Measurements – R. L. Cohen and K. W. West, 17 to 23 (Dec).
Stainless Steel, Nickel Brazing of Laser Beam Cut – J. R. Thyssen, 26 to 30 (Oct).
Stainless Steels – Part II, Heat-Affected Zone Cracking in Thick Sections of Austenitic – R. D. Thomas, Jr., 24 to 32 (Dec).
Steam Generator Tube-to-Tubesheet and Shell Closure Welding, Clinch River Modular – D. P. Viri and W. F. Iceland, 18 to 21 (Jul).
Steel, Inspection of Fabricated Boiler Support – E. R. Holby, 25 to 38 (Aug).
*Steel Service Center Enters Computer Age With Automatic Shape Cutting Equipment – 57 to 58 (Jan).
*Strong, Lightweight Ship Panels Fabricated from High Frequency Welded Beams – 43 (May).
*Students Find Sacrifice Paying Off, Welding Night Students – 57 (Mar).
*Students Weld Mascot for College Centennial – H. Hankes, 60 to 61 (Dec).
*Submerged Arc Welding Builds Widest Water Pipeline in Southeast – 42 (May).

Tantalum, Neutral Source Heat Exchanger, Fabrication of a – R. D. Dixon, H. M. Crane, T. L. Crisler, and V. Vigil, 43 to 44 (Apr).
*Teamwork Tests Automatic GTA Welding on Desert Pipeline Project – D. C. Ellis, 53 to 54 (Jul).
*Temperature Indicating Crayons Ease Repair of High Strength Steel Auto Components – 52 (Apr).
*Test for Aluminum Armor Weldments Earns Patent and Award – B. Lessels, 62 (Dec).
*Three-D Vision-Guided Robotic Welding System Aids Railroad Repair Shop – D. Lacoe and L. Seibert, 53 to 56 (Mar).
*Track-Mounted Welding Robot Produces Flexible Manufacturing System – 64 (Dec).
*Tractor Assembly Production, Robotic Arc Welding System Boosts – 60 to 61 (Nov).
*Transport/Positioning Systems Speed Assembly of Auto Underbodies – 56 to 57 (Nov).
*Two Sources Supply Welding Power for 26 Arcs Across 2,700 Ft Span – 51 to 52 (Jan).

*Ultrasonic Microscope Aids in Spotting Unsound Welds – T. Adams, 47 to 48 (Aug).
*Underwater Dock Repair Demands Extensive Hyperbaric Welding – 54 (Aug).
Underwater Magnetic Particle Inspection of Welds – W. C. Chedister, 24 to 26 (May).
*Using The Business and Personal Computer To Solve Typical Layout Problems – R. E. Yates and C. Day, 46 to 47 (Feb).
*Utah Sculptor Flies His Colors Welding 'The King of Birds' – P. Schmitt, 47 to 49 (Jul).

Vacuum, Process Control Criteria for Brazing Aluminum under – W. L. Winterbottom, 33 to 39 (Oct).
*Valve Maker, Automatic Plasma Arc Hardfacing Smooths the Way for – 63 (Jun).
Variable Polarity Plasma Arc Welding on the Space Shuttle External Tank – A. C. Nunes, Jr., E. O. Bayless, Jr., C. S. Jones III, P. M. Munafo, A. P. Biddle, and W. A. Wilson, 27 to 35 (Sep).
*Various Extinguishers Combat Welding Fires – A. W. Krulee, 46 to 47 (Oct).
*Vision-Guided Robotic Welding System Aids Railroad Repair Shop, Three-D – D. Lacoe and L. Seibert, 53 to 56 (Mar).

A Practical Welder article

*Washing Machine Production Time, Metal Powder Continuous Electrode Saves – 53 to 54 (Jan).
*Water Pipeline in Southeast, Submerged Arc Welding Builds Widest – 42 (May).
Weld Appearances May Be Deceiving – E. R. Holby, 33 to 36 (May).
*Welded Aluminum Sports Tubing, High Frequency System Keys Switch from Seamless to – 49 (Aug).
Welded Metal Bellows, Optical Microtracking of Edge Welds on – R. R. Larsen, 19 to 23 (May).
Welded Tubing, Production Eddy Current Testing of – B. Roberts, 41 to 44 (Aug).
Welder Performance through Management Quality Teams, Improving – E. G. Hornberger and W. B. Flowers, 17 to 19 (Sep).
*Welding and Inspection: Looking Beyond Codes and Specifications – R. Johnson, 62 (Mar).
*Welding Department Survey Proves a Blueprint for the Future, College – L. Defreitas, 59 to 60 (Jun).
*Welding Electrode Means Smooth Sailing for Florida Boat Yard – P. Schmitt, 48 (Oct).
*Welding Equipment Firm Uses New Material Planning System to Reduce Inventory – 55 to 56 (Feb).
*Welding Fires, Various Extinguishers Combat – A. W. Krulee, 46 to 47 (Oct).
*Welding Fumes Controlled at Source by Collecting System's Unusual Design – 55 to 56 (Jan).
Welding Health Standards and Regulations – O. J. Fisher, 21 to 24 (Sep).
Welding Installation of A120-A53 Steel Pipe – H. A. Sosnin, 28 to 31 (Apr).
*Welding Night Students Find Sacrifice Paying Off – 57 (Mar).
*Welding Power for 26 Arcs Across 2,700 Ft Span, Two Sources Supply – 51 to 52 (Jan).
Welding Robots in the American Workplace – Are We Ready? – J. Weber, P. Schmitt, and M. Bock, 23 to 33 (Nov).
*Welding System Aids Railroad Repair Shop, Three-D Vision-Guided Robotic – D. Lacoe and L. Seibert, 53 to 56 (Mar).
*Weld Metal Stretches With Lift Crane Boom – 44 to 45 (Sep).
Weld Modeling Applications – S. S. Glickstein and E. Friedman, 38 to 42 (Sep).
Weld Pool Viewing for Process Monitoring and Control, Coaxial Arc – R. W. Richardson, A. Gutow, R. A. Anderson, and D. F. Farson, 43 to 50 (Mar).
*Weld Quality Monitor Locates Defects As They Happen, 'Real Time' – 50 (Aug).
Weld Strength Determined from Simple Electrical Measurements, Spot – R. L. Cohen and K. W. West, 17 to 23 (Dec).
*Wire Passes Acid Test on Battery Trays, Smallest Diameter Flux Cored – 58 to 61 (Mar).
*Women in Welding – A Welcome Alternative to Traditional Careers – L. Tressler, 51 to 52 (Aug).

AUTHOR INDEX

Aanstoos, T. A. and Weldon, J. M. – Homopolar Pulse Upset Welding of API X-60 High Strength Line Pipe, 23 to 28 (Jul).
*Adams, T. – Ultrasonic Microscope Aids in Spotting Unsound Welds, 47 to 48 (Aug).
Albright, C. E. and Diebold, T. P. – 'Laser-GTA' Welding of Aluminum Alloy 5052, 18 to 24 (Jun).
Albright, C. E. and Jones, T. A. – Laser Beam Brazing of Small Diameter Copper Wires to Laminated Copper Circuit Boards, 34 to 47 (Dec).
Anderson, D. G. and Severance, W. S. – How Plasma Arc Cutting Gases Affect Productivity, 35 to 39 (Feb).
Anderson, R. A., Richardson, R. W., Gutow, A., and Farson, D. F. – Coaxial Arc Weld Pool Viewing for Process Monitoring and Control, 43 to 50 (Mar).

Barhorst, S. and Tomsic, M. – Keyhole Plasma Arc Welding of Aluminum with Variable Polarity Power, 25 to 32 (Feb).
Blakeley, P. J. and Sanderson, A. – The Origin and Effects of Magnetic Fields in Electron Beam Welding, 42 to 49 (Jan).
Blodgett, O. W. – Calculating Cooling Rates by Computer Programming, 19 to 34 (Mar).
Bock, M., Weber, J., and Schmitt, P. – Welding Robots in the American Workplace – Are We Ready? 23 to 33 (Nov).
Bose, D., Datta, A., and Rabinkin, A. – Rapidly Solidified Copper-Phosphorus Base Brazing Foils, 14 to 21 (Oct).
*Brennan, D. T. – Improved Solder Alloy Enhances Auto Radiators, 41 to 45 (Oct).
Burgan, C. E. and Scarbrough, J. D. – Reducing Hot-Short Cracking in Iridium GTA Welds Using Four-Pole Oscillation, 54 to 56 (Jun).

Chedister, W. C. – Underwater Magnetic Particle Inspection of Welds, 24 to 26 (May).
Cohen, R. L. and West, K. W. – Flaws in Aluminum Spot Welds Observed by Electrical Measurements, 21 to 23 (Aug).
Cohen, R. L. and West, K. W. – Spot Weld Strength Determined from Simple Electrical Measurements, 17 to 23 (Dec).
Crane, H. M., Dixon, R. D., Crisler, T. L., and Vigil, V. – Fabrication of a Tantalum Neutral Source Heat Exchanger, 43 to 44 (Apr).
Crisler, T. L., Dixon, R. D., Crane, H. M., and Vigil, V. – Fabrication of a Tantulum Neutral Source Heat Exchanger, 43 to 44 (Apr).

Danis, J. I. – Field Heat Treatment of Small Diameter Carbon Steel Valves, 29 to 30 (May).
Datta, A., Rabinkin, A., and Bose, D. – Rapidly Solidified Copper-Phosphorus Base Brazing Foils, 14 to 21 (Oct).
*Day, C. and Yates, R. W. – Using the Business and Personal Computer To Solve Typical Layout Problems, 46 to 47 (Feb.)
*Defreitas, L. – College Welding Department Survey Proves a Blueprint for the Future, 59 to 60 (Jun).
Denney, P. E., Metzbower, E. A., Fraser, F. W., and Moon, D. W. – Mechanical Properties of Laser Beam Welds, 39 to 43 (Jul).
Dias, R., Pense, A. W., and Fisher, J. W. – Examination and Repair of Bridge Structures, 19 to 25 (Apr).
Diebold, T. P. and Albright, C. E. – 'Laser-GTA' Welding of Aluminum Alloy 5052, 18 to 24 (Jun).
Dixon, R. D., Crane, H. M., Crisler, T. L., and Vigil, V. – Fabrication of a Tantalum Neutral Source Heat Exchanger, 43 to 44 (Apr).

*A Practical Welder article

Earvolino, L. P. – Evaluation of Moisture-Resistant E70XX Electrodes at Extended Exposure Times, 36 to 38 (Mar).
Ebert, H. W. – Repair Welding of Refinery and Chemical Plant Piping Systems, 18 to 23 (Feb).
Eichhorn, F., Remmel, J., and Wübbels, B. – High Speed Electroslag Welding, 37 to 41 (Jan).
*Ellis, D. C. – Teamwork Tests Automatic GTA Welding on Desert Pipeline Project, 53 to 54 (Jul).
Essers, W. G. and Van Gompel, M. R. M. – Arc Control with Pulsed GMA Welding, 26 to 32 (Jun).

Farson, D. F., Richardson, R. W., Gutow, A., and Anderson, R. A. – Coaxial Arc Weld Pool Viewing for Process Monitoring and Control, 43 to 50 (Mar).
Fisher, J. W., Pense, A. W., and Dias, R. – Examination and Repair of Bridge Structures, 19 to 25 (Apr).
Frassek, B., Kuhne, A. H., and Starke, G. – Components for the Automated GMAW Process, 31 to 34 (Jan).

*Gellerman, M. J. – How Difficult Is It to Learn Gas Metal Arc Welding? 41 (May).
Gutow, A., Richardson, R. W., Anderson, R. A., and Farson, D. F. – Coaxial Arc Weld Pool Viewing for Process Monitoring and Control, 43 to 50 (Mar).

*Hankes, H. – Students Weld Mascot for College Centennial, 60 to 61 (Dec).
Hanright, J. – Selecting Your First Arc Welding Robot – A Guide to Equipment and Features, 35 to 37 (Nov).
Holby, E. R. – Inspection of Fabricated Boiler Support Steel, 25 to 38 (Aug).
Holby, E. R. – Weld Appearances May Be Deceiving, 33 to 36 (May).
Holdren, R. L. – Attracting, Training and Qualifying NDT Personnel, 18 to 20 (Aug).

Iceland, W. F. and Viri, D. P. – Clinch River Modular Steam Generator Tube-to-Tubesheet and Shell Closure Welding, 18 to 21 (Jul).

Johnson, R. – Welding and Inspection: Looking Beyond Codes and Specifications, 62 (Mar).
Jones, T. A. and Albright, C. E. – Laser Beam Brazing of Small Diameter Copper Wires to Laminated Copper Circuit Boards, 34 to 47 (Dec).
Jordan, C. R. and Krumpen, Jr., R. P. – Performance of Ship Structural Details, 18 to 28 (Jan).
Jordan, C. R. and Krumpen, Jr., R. P. – Reduced Fillet Weld Sizes for Naval Ships, 34 to 41 (Apr).

*Krulee, A. W. – Various Extinguishers Combat Welding Fires, 46 to 47 (Oct).
Krumpen, Jr., R. P. and Jordan, C. R. – Performance of Ship Structural Details, 18 to 28 (Jan).
Krumpen, Jr., R. P. and Jordan, C. R. – Reduced Fillet Weld Sizes for Naval Ships, 34 to 41 (Apr).
Kuhne, A. H., Frassek, B., and Starke, G. – Components for the Automated GMAW Process, 31 to 34 (Jan).

*Lacoe, D. and Seibert, L. – Three-D Vision-Guided Robotic Welding System Aids Railroad Repair Shop, 53 to 56 (Mar).
*Lane, J. W. and Brennan, D. T. – Improved Solder Alloy Enhances Auto Radiators, 41 to 45 (Oct).
Larsen, R. R. – Optical Microtracking of Edge Welds on Welded Metal Bellows, 19 to 23 (May).
Lee, J. – Robot Welding in the Factory-of-the-Future, 35 to 37 (Nov).
*Lessels, B. – Test for Aluminum Armor Weldments Earns Patent and Award, 62 (Dec).

Mallya, U. D. – Effects of Contact Resistance in Resistance Welding of Aluminum, 41 to 44 (Feb).
Messer, J. S. – High Capacity Robots in Demanding Resistance Welding Applications, 46 to 49 (Nov).
Metzbower, E. A., Denney, P. E., Fraser, F. W., and Moon, D. W. – Mechanical Properties of Laser Beam Welds, 39 to 43 (Jul).

Napor, C. A. and Forbes, A. G. – Short-Run, Multiple Product Brazing and Soldering Machines, 23 to 25 (Oct).

Pense, A. W., Dias, R., and Fisher, J. W. – Examination and Repair of Bridge Structures, 19 to 25 (Apr).
*Powers, J. – Electron Beam Welding – Applications and Equipment Improvements, 39 to 40 (May).

Rabinkin, A., Datta, A., and Bose, D. – Rapidly Solidified Copper-Phosphorus Base Brazing Foils, 14 to 21 (Oct).
Remmel, J., Eichhorn, F., and Wübbels, B. – High Speed Electroslag Welding, 37 to 41 (Jan).
Richardson, R. W., Gutow, A., Anderson, R. A., and Farson, D. F. – Coaxial Arc Weld Pool Viewing for Process Monitoring and Control, 43 to 50 (Mar).
Roberts, B. – Production Eddy Current Testing of Welded Tubing, 41 to 44 (Aug).

Sanderson, A. and Blakeley, P. J. – The Origin and Effects of Magnetic Fields in Electron Beam Welding, 42 to 49 (Jan).
Sandor, L. W. – Pulsed GMA Spot Welding of Copper-Nickel to Steel, 35 to 50 (Jun).
Scarbrough, J. D. and Burgan, C. E. – Reducing Hot-Short Cracking in Iridium GTA Welds Using Four-Pole Oscillation, 54 to 56 (Jun).
*Schmitt, P. – Utah Sculptor Flies His Colors Welding 'The King of Birds,' 47 to 49 (Jul).
Schmitt, P., Weber, J., and Bock, M. – Welding Robots in the American Workplace – Are We Ready? 23 to 33 (Nov).
*Schmitt, P. – Welding Electrode Means Smooth Sailing for Florida Boat Yard, 48 (Oct).
*Seibert, L. and Lacoe, D. – Three-D Vision-Guided Robotic Welding System Aids Railroad Repair Shop, 53 to 56 (Mar).
Severance, W. S. and Anderson, D. G. – How Plasma Arc Cutting Gases Affect Productivity, 35 to 39 (Feb).
Sosnin, H. A. – Welding Installation of A120-A53 Steel Pipe, 28 to 31 (Apr).
Starke, G., Kuhne, A. H., and Frassek, B. – Components for the Automated GMAW Process, 31 to 34 (Jan).

*Tecklenburg, M. – Precision Buildup Method Draws a Bead on Condemned Jet Engine Parts, 51 to 52 (Jul).
Thomas, R. D., Jr. – Heat-Affected Zone Cracking in Thick Sections of Austenitic Stainless Steels – Part I, 24 to 32 (Dec).
Thyssen, J. R. – Nickel Brazing of Laser Beam Cut Stainless Steel, 26 to 30 (Oct).
Tomsic, M. and Barhorst, S. – Keyhole Plasma Arc Welding of Aluminum with Variable Polarity Power, 25 to 32 (Feb).
*Tressler, L. – Women in Welding – A Welcome Alternative to Traditional Careers, 51 to 52 (Aug).

A Practical Welder article

Van Gompel, M. R. M. and Essers, W. G. – Arc Control with Pulsed GMA Welding, 26 to 32 (Jun).
Van Malssen, S. H. – The Effects of Arc Strikes on Steels Used in Nuclear Construction, 29 to 31 (Jul).
Vigil, V., Dixon, R. D., Crane, H. M., and Crisler, T. L. – Fabrication of a Tantalum Neutral Source Heat Exchanger, 43 to 44 (Apr).
Viri, D. P. and Iceland, W. F. – Clinch River Modular Steam Generator Tube-to-Tubesheet and Shell Closure Welding, 18 to 21 (Jul).
*Von Ahrens – Consumable Spacer Simplifies GTAW Pipe Welding, 55 (Jul).

*Weber, J. – Minnesota Welder Builds Mini-Sub for Great Lakes Shipwreck Venture, 57 to 59 (Dec).
Weber, J., Schmitt, P., and Bock, M. – Welding Robots in the American Workplace – Are We Ready? 23 to 33 (Nov).
Weldon, J. M. and Aanstoos, T. A. – Homopolar Pulse Upset Welding of API X-60 High Strength Line Pipe, 23 to 28 (Jul).
West, K. W. and Cohen, R. L. – Flaws in Aluminum Spot Welds Observed by Electrical Measurements, 21 to 23 (Aug).
West, K. W. and Cohen, R. L. – Spot Weld Strength Determined from Simple Electrical Measurements, 17 to 23 (Dec).
Winterbottom, W. L. – Process Control Criteria for Brazing Aluminum under Vacuum, 33 to 39 (Oct).
Wübbels, B., Eichhorn, F., and Remmel, J. – High Speed Electroslag Welding, 37 to 41 (Jan).

*Yates, R. E. and Day, C. – Using the Business and Personal Computer To Solve Typical Layout Problems, 46 to 47 (Feb).

Part 2—WELDING RESEARCH SUPPLEMENT

SUBJECT INDEX

Aging Behavior of Types 308 and 308CRE Stainless Steel Welds, The Solidification and – J. M. Vitek and S. A. David, 246-s to 253-s (Aug).
Alloy 718 Weldments, Effect of Heat Treatment on the Tensile and Fracture Toughness of – W. J. Mills, 237-s to 245-s (Aug).
Alloy 800, An Investigation of Weld Cracking in – J.C. Lippold, 91-s to 103-s (Mar).
Aluminum Alloy Sheet, The Influence of External Local Heating in Preventing Cracking During Welding of – I. E. Hernandez and T. H. North, 84-s to 90-s (Mar).
Aluminum Brazing Filler Metals Using Hot Stage Scanning Electron Microscopy, A Study of – B. McGurran and M. G. Nicholas, 295-s to 299-s (Oct).
Aluminum on C-Mn-Nb Steel Submerged Arc Weld Metal Properties, Effect of – H. Terashima and P. H. M. Hart, 173-s to 183-s (Jun).
Aluminum Welds, A Study of the Mechanical Properties of Cast-to-Wrought – S. P. Sunday and D. D. Rager, 47-s to 57-s (Feb).
Analysis of Inclusions of Submerged Arc Welds in Microalloyed Steels, The – A. R. Bhatti, M. E. Saggese, D. N. Hawkins, J. A. Whiteman and M. S. Golding, 224-s to 230-s (Jul).
Analytical Modeling of Thermal Stress Relieving in Stainless and High Strength Steel Weldments – J. E. Agapakis and K. Masubuchi, 187-s to 196-s (Jun).
Assessment Criterion for Variability of Delta Ferrite in Austenitic Weld and Clad Metals – K. Prasad Rao and S. Prasannakumar, 231-s to 236-s (Jul).
Austenitic Fe-Mn-Ni Weld Metal for Dissimilar Metal Welding, An Evaluation of – J. A. Self, D. K. Matlock, and D. L. Olson, 282-s to 288-s (Sep).
Austenitic Stainless Steel: Part II – Porosity, Cracking and Creep Properties, The Weldability of Nitrogen-Containing – T. Ogawa, K. Suzuki, and T. Zaizen, 213-s to 223-s (Jul).
Austenitic Stainless Steels, Technical Note: Microstructural Evolution During Inertia Friction Welding of – J. C. Lippold and B. Odegard, 35-s to 38-s (Jan).
Austenitic Stainless Steel Strips, Role of Shielding Gases in Flaw Formation in GTAW of – V. P. Kujanpää, L. P. Karjalainen and H. A. V. Sikanen, 151-s to 155-s (May).
Austenitic Weld and Clad Metals, Assessment Criterion for Variability of Delta Ferrite in – K. Prasad Rao and S. Prasannakumar, 231-s to 236-s (Jul).

Brazed with Silver-Base Filler Metals, Effect of Composition on the Corrosion Behavior of Stainless Steels – T. Takemoto and I. Okamoto, 300-s to 307-s (Oct).
Braze Joints as a Function of Thermal Exposure, Microstructural Characterization of Nickel – E. I. Savage and J. J. Kane, 316-s to 323-s (Oct).
Brazing Cemented Carbides, An Explanation of Wettability Problems When – K. A. Thorsen, H. Fordsmand, and P. L. Praestgaard, 308-s to 315-s (Oct).
Brazing Filler Metals Using Hot Stage Scanning Electron Microscopy, A Study of Aluminum – B. McGurran and M. G. Nicholas, 295-s to 299-s (Oct).
Brazing Investigations, Optical Hot Stage Microscopy for – K. A. Thorsen, H. Fordsmand, and P. L. Praestgaard, 339-s to 344-s (Nov).

Cast Steels – Part I, Optimizing Repair Welding Techniques in – D. K. Aidun and W. F. Savage, 345-s to 353-s (Nov).
Cast-to-Wrought Aluminum Welds, A Study of the Mechanical Properties of – S. P. Sunday and D. D. Rager, 47-s to 57-s (Feb).
Cemented Carbides, An Explanation of Wettability Problems When Brazing – K. A. Thorsen, H. Fordsmand, and P. L. Praestgaard, 308-s to 315-s (Oct).
Chi-Phase Formation During Solidification and Cooling of CF-8M Weld Metal – M. J. Cieslak, A. M. Ritter, and W. F. Savage, 133-s to 140-s (Apr).
Cluster Porosity Effects on Transverse Fillet Weld Strength – E. P. Cox and H. S. Lamba, 1-s to 8-s (Jan).
Comparison of Hydrogen Assisted Cracking Susceptibility of Cast and Rolled HY-130 Steel Plate – K. D. Challenger and B. J. Mason, 39-s to 46-s (Feb).

*A Practical Welder article

Corrosion Behavior of Stainless Steels Brazed with Silver-Base Filler Metals, Effect of Composition on the—T. Takemoto and I. Okamoto, 300-s to 307-s (Oct).
Cracking, A Fundamental Study of the Beneficial Effects of Delta Ferrite in Reducing Weld—J. A. Brooks, A. W. Thompson and J. C. Williams, 71-s to 83-s (Mar).
Cracking and Creep Properties, The Weldability of Nitrogen-Containing Austenitic Stainless Steel: Part II—Porosity—T. Ogawa, K. Suzuki, and T. Zaizen, 213-s to 223-s (Jul).
Cracking During Welding of Aluminum Alloy Sheet, The Influence of External Local Heating in Preventing—I. E. Hernandez and T. H. North, 84-s to 90-s (Mar).
Cracking in Alloy 800, An Investigation of Weld—J. C. Lippold, 91-s to 103-s (Mar).
Cracking in Thick Sections of Austenitic Stainless Steels—Part II, Heat-Affected Zone—R. D. Thomas, Jr., 355-s to 368-s (Dec).
Cracking in Weld Metal, A Predicition Diagram For Preventing Hydrogen-Assisted—N. G. Alcantara and J. H. Rogerson, 116-s to 122-s (Apr).
Cracking Susceptibility of Cast and Rolled HY-130 Steel Plate, Comparison of Hydrogen Assisted—K. D. Challenger and B. J. Mason, 39-s to 46-s (Feb).
Critical Evaluation of the Glycerin Test—M. A. Quintana, 141-s to 150-s (May).

Dew Point/Temperature Curves for Selected Metal/Metal Oxide Systems in Hydrogen Atmospheres—M. C. Rey, D. P. Kramer, W. R. Henderson and L. D. Abney, 162-s to 166-s (May).
Diffusion Welding, Use of Electrodeposited Silver as an Aid in—J. W. Dini, W. K. Kelley, W. C. Cowden and E. M. Lopez, 28-s to 34-s (Jan).
Discontinuities in Welds, Inherent Through-Wall Depth Limitations on Blunt—M. B. Kasen, G. E. Hicho and R. C. Placious, 184-s to 186-s (Jun).
Dissimilar Metal Welding, An Evaluation of Austenitic Fe-Mn-Ni Weld Metal for—J. A. Self, D. K. Matlock, and D. L. Olson, 282-s to 288-s (Sep).

Effect of Aluminum on C-Mn-Nb Steel Submerged Arc Weld Metal Properties—H. Terashima and P. H. M. Hart, 173-s to 183-s (Jun).
Effect of Composition of the Corrosion Behavior of Stainless Steels Brazed with Silver-Base Filler Metals—T. Takemoto and I. Okamoto, 300-s to 307-s (Oct).
Effect of Heat Treatment on the Tensile and Fracture Toughness of Alloy 718 Weldments—W. J. Mills, 237-s to 245-s (Aug).
Effect of Sigma Phase Formation on the Corrosion and Mechanical Properties of Nb-Stabilized Stainless Steel Cladding, The—K. Klemetti, H. Hanninen and J. Kivilahti, 17-s to 27-s (Jan).
Effect of Surface Convection on GTA Weld Zone Temperatures—W. H. Giedt, X.-C. Wei and S.-R. Wei, 376-s to 383-s (Dec).
Effects of Electrode Extension on Deposit Characteristics and Metal Transfer of E70T-4 Electrodes—I. E. French, 167-s to 172-s (Jun).
Electrode Extension on Deposit Characteristics and Metal Transfer of E70T-4 Electrodes, Effects of—I. E. French, 167-s to 172-s (Jun).
Electrodeposited Silver as an Aid in Diffusion Welding, Use of—J. W. Dini, W. K. Kelley, W. C. Cowden and E. M. Lopez, 28-s to 34-s (Jan).
Electrodes, Fume Generation and Melting Rates of Shielded Metal Arc Welding—R. K. Tandon, J. Ellis, P. T. Crisp, and R. S. Baker, 263-s to 266-s (Aug).
Electron Beam Welding of C/Mn Steels—Toughness and Fatigue Properties—S. Elliott, 9-s to 16-s (Jan).
Electron Beam Welds in Alloy Fe-0.2%C-12%Cr-1%Mo, Mechanical Properties and Structure of—K. Kussmaul, D. Blind, P. Deimel, and W. Gaudig, 267-s to 272-s (Sep).
Evaluation of Austenitic Fe-Mn-Ni Weld Metal for Dissimilar Metal Welding—J. A. Self, D. K. Matlock, and D. L. Olson, 282-s to 288-s (Sep).
Evaluation of Copper-Stainless Steel Inertia Friction Welds—R. A. Bell, J. C. Lippold, and D. R. Anderson, 325-s to 332-s (Nov).
Explanation of Wettability Problems When Brazing Cemented Carbides—K. A. Thorsen, H. Fordsmand, and P. L. Praestgaard, 308-s to 315-s (Oct).
Expulsion—A Comparative Study, Spot Weld Properties When Welding With—M. Kimchi, 58-s to 63-s (Feb).

Fatigue Properties, Electron Beam Welding of C/Mn Steels—Toughness and—S. Elliott, 9-s to 16-s (Jan).
Ferrite in Austenitic Weld and Clad Metals, Assessment Criterion for Variability of Delta—K. Prasad Rao and S. Prasannakumar, 231-s to 236-s (Jul).
Ferrite in Reducing Weld Cracking, A Fundamental Study of the Beneficial Effects of Delta—J. A. Brooks, A. W. Thompson and J. C. Williams, 71-s to 83-s (Mar).
Ferrite, Manganese Effect on Stainless Steel Weld Metal—E. R. Szumachowski and D. J. Kotecki, 156-s to 161-s (May).
Ferritic Consumable Welding of 9% Nickel Steel to Enhance Safety and Economy, Matching—F. Koshiga, J. Tanaka, I. Watanabe, and T. Takamura, 105-s to 115-s (Apr).
Filler Metals, Effect of Composition on the Corrosion Behavior of Stainless Steels Brazed with Silver-Base—T. Takemoto and I. Okamoto, 300-s to 307-s (Oct).
Filler Metals Using Hot Stage Scanning Electron Microscopy, A Study of Aluminum Brazing—B. McGurran and M. G. Nicholas, 295-s to 299-s (Oct).
Fillet Welded T-Joints, Significance of Weld Undercut in Design of—C.-L. Tsai and M.-J. Tsai (Feb).
Fillet Weld Strength, Cluster Porosity Effects on Transverse—E. P. Cox and H. S. Lamba, 1-s to 8-s (Jan).
Finite Element Modeling of the Resistance Spot Welding Process, The—H. A. Nied, 123-s to 132-s (Apr).
Flaw Formation in GTAW of Austenitic Stainless Steel Strips, Role of Shielding Gases in—V. P. Kujanpää, L. P. Karjalainen and H. A. V. Sikanen, 151-s to 155-s (May).
Fracture Toughness of Alloy 718 Weldments, Effect of Heat Treatment on the Tensile and—W. J. Mills, 237-s to 245-s (Aug).
Fracture Toughness of HY-130 Steel Weld Metals—D. F. Hasson, C. A. Zanis and D. R. Anderson, 197-s to 202-s (Jun).
Friction Welding for Low Alloy Steel Pipes, A Parametric Study of Inertia—M. D. Tumuluru, 289-s to 294-s (Sep).
Friction Welding of Austenitic Stainless Steels, Technical Note: Microstructural Evolution During Inertia—J. C. Lippold and B. C. Odegard, 35-s to 38-s (Jan).
Friction Welds, An Evaluation of Copper-Stainless Steel Inertia—R. A. Bell, J. C. Lippold, and D. R. Anderson, 325-s to 332-s (Nov).
Fume Generation and Melting Rates of Shielded Metal Arc Welding Electrodes—R. K. Tandon, J. Ellis, P. T. Crisp, and R. S. Baker, 263-s to 266-s (Aug).
Fundamental Study of the Beneficial Effects of Delta Ferrite in Reducing Weld Cracking, A—J. A. Brooks, A. W. Thompson and J. C. Williams, 71-s to 83-s (Mar).

Glycerin Test, A Critical Evaluation of the—M. A. Quintana, 141-s to 149-s (May).
GTA Weld Zone Temperatures, Effect of Surface Convection on Stationary—W. H. Giedt, X.C. Wei and S.-R. Wei, 376-s to 383-s (Dec).
GTAW of Austenitic Stainless Steel Strips, Role of Shielding

Gases in Flaw Formation in—V. P. Kujanpää, L. P. Karjalainen and H. A. V. Sikanen, 151-s to 155-s (May).

Heat-Affected Zone Cracking in Thick Sections of Austenitic Stainless Steels—Part II—R. D. Thomas, Jr., 355-s to 368-s (Dec).
Heating in Preventing Cracking During Welding of Aluminum Alloy Sheet, The Influence of External Local—I. E. Hernandez and T. H. North, 84-s to 90-s (Mar).
Heat Treatment on the Tensile and Fracture Toughness of Alloy 718 Weldments, Effect of—W. J. Mills, 237-s to 245-s (Aug).
HSLA Steels, The Weldability of Sulfide Shape Controlled Linepipe and—G. A. Ratz, E. F. Nippes, J. Mathew, and W. H. Baek, 333-s to 338-s (Nov).
Hydrogen-Assisted Cracking in Weld Metal, A Prediction Diagram for Preventing—N. G. Alcantara and J. H. Rogerson, 116-s to 122-s (Apr).
Hydrogen Assisted Cracking Susceptibility of Cast and Rolled HY-130 Steel Plate, Comparison of—K. D. Challenger and B. J. Mason, 39-s to 46-s (Feb).
Hydrogen Atmospheres, Dew Point/Temperature Curves for Selected Metal/Metal Oxide Systems in—M. C. Rey, D. P. Kramer, W. R. Henderson and L. D. Abney, 162-s to 166-s (May).

Inertia Friction Welding for Low Alloy Steel Pipes, A Parametric Study of—M. D. Tumuluru, 289-s to 294-s (Sep).
Inertia Friction Welding of Austenitic Stainless Steels, Technical Note: Microstructural Evolution During—J. C. Lippold and B. C. Odegard, 35-s to 38-s (Jan).
Inertia Friction Welds, An Evaluation of Copper-Stainless Steel—R. A. Bell, J. C. Lippold, and D. R. Anderson, 325-s to 332-s (Nov).
Influence of External Local Heating in Preventing Cracking During Welding of Aluminum Alloy Sheet, The—I. E. Hernandez and T. H. North, 84-s to 90-s (Mar).
Inherent Through-Wall Depth Limitations on Blunt Discontinuities in Welds—M. B. Kasen, G. E. Hicho and R. C. Placious, 184-s to 186-s (Jun).
Investigation of Weld Cracking in Alloy 800—J. C. Lippold, 91-s to 103-s (Mar).

Linepipe and HSLA Steels, The Weldability of Sulfide Shape Controlled—G. A. Ratz, E. F. Nippes, J. Mathew, and W. H. Baek, 333-s to 338-s (Nov).

Manganese Effect on Stainless Steel Weld Metal Ferrite—E. R. Szumachowski and D. J. Kotecki, 156-s to 161-s (May).
Matching Ferritic Consumable Welding of 9% Nickel Steel to Enhance Safety and Economy—F. Koshiga, J. Tanaka, I. Watanabe, and T. Takamura, 105-s to 115-s (Apr).
Mechanical Properties and Structure of Electron Beam Welds in Alloy Fe-0.2%C-12%Cr-1%Mo—K. Kussmaul, D. Blind, P. Deimel, and W. G. Gaudig, 267-s to 272-s (Sep).
Mechanical Properties of Cast-to-Wrought Aluminum Welds, A Study of the—S. P. Sunday and D. D. Rager, 47-s to 57-s (Feb).
Microstructural Characterization of Nickel Braze Joints as a Function of Thermal Exposure—E. I. Savage and J. J. Kane, 316-s to 323-s (Oct).
Microstructural Evolution During Inertia Friction Welding of Austenitic Stainless Steels, Technical Note:—J. C. Lippold and B. C. Odegard, 35-s to 38-s (Jan).
Microstructure-Thermal History Correlations for HY-130 Thick Section Weldments—K. D. Challenger, R. B. Brucker, W. M. Elger, and M. J. Sorek, 254-s to 262-s (Aug).

Nickel Braze Joints as a Function of Thermal Exposure, Microstructural Characterization of—E. I. Savage and J. J. Kane, 316-s to 323-s (Oct).
Nickel Steel to Enhance Safety and Economy, Matching Ferritic Consumable Welding of 9%—F. Koshiga, J. Tanaka, I. Watanabe, and T. Takamura, 105-s to 115-s (Apr).
Nitrogen-Containing Austenitic Stainless Steel: Part II—Porosity, Cracking and Creep Properties, The Weldability of—T. Ogawa, K. Suzuki, and T. Zaizen, 213-s to 223-s (Jul).

Optical Hot Stage Microscopy for Brazing Investigations—K. A. Thorsen, H. Fordsmand, and P. L. Praestgaard, 339-s to 344-s (Nov).
Optimizing Repair Welding Techniques in Cast Steels—Part I—D. K. Aidun and W. F. Savage, 345-s to 353-s (Nov).

Parametric Study of Inertia Friction Welding for Low Alloy Steel Pipes—M. D. Tumuluru, 289-s to 294-s (Sep).
Prediction Diagram for Preventing Hydrogen-Assisted Cracking in Weld Metal, A—N. G. Alcantara and J. H. Rogerson, 116-s to 122-s (Apr).

Repair Welding Techniques in Cast Steels—Part I, Optimizing—D. K. Aidun and W. F. Savage, 345-s to 353-s (Nov).
Resistance Spot Welding Process, The Finite Element Modeling of the—H. A. Nied, 123-s to 132-s (Apr).
Role of Shielding Gases in Flaw Formation in GTAW of Austenitic Stainless Steel Strips—V. P. Kujanpää, L. P. Karjalainen, and H. A. V. Sikanen, 151-s to 155-s (May).

Safety and Economy, Matching Ferritic Consumable Welding of 9% Nickel Steel to Enhance—F. Koshiga, J. Tanaka, I. Watanabe, and T. Takamura, 105-s to 115-s (Apr).
Shielded Metal Arc Welding Electrodes, Fume Generation and Melting Rates of—R. K. Tandon, J. Ellis, P. T. Crisp, and R. S. Baker, 263-s to 266-s (Aug).
Shielding Gases in Flaw Formation in GTAW of Austenitic Stainless Steel Strips, Role of—V. P. Kujanpää, L. P. Karjalainen and H. A. V. Sikanen, 151-s to 155-s (May).
Sigma Phase Formation on the Corrosion and Mechanical Properties of Nb-Stabilized Stainless Steel Cladding, The Effect of—K. Klemetti, H. Hanninen and J. Kivilahti, 17-s to 27-s (Jan).
Significance of Weld Undercut in Design of Fillet Welded T-Joints—C. -L. Tsai and M. -J. Tsai, 64-s to 70-s (Feb).
Silver as an Aid in Diffusion Welding, Use of Electrodeposited—J. W. Dini, W. K. Kelley, W. C. Cowden and E. M. Lopez, 28-s to 34-s (Jan).
Solidification and Aging Behavior of Types 308 and 308CRE Stainless Steel Welds, The—J. M. Vitek and S. A. David, 246-s to 253-s (Aug).
Solidification and Cooling of CF-8M Weld Metal, Chi-Phase Formation During—M. J. Cieslak, A. M. Ritter, and W. F. Savage, 133-s to 140-s (Apr).
Spot Weld Properties When Welding With Expulsion—A Comparative Study—M. Kimchi, 58-s to 63-s (Feb).
Stainless and High Strength Steel Weldments, Analytical Modeling of Thermal Stress Relieving in—J. E. Agapakis and K. Masubuchi, 187-s to 196-s (Jun).
Stainless Steel Cladding, The Effect of Sigma Phase Formation on the Corrosion and Mechanical Properties of Nb-Stabilized—K. Klemetti, H. Hanninen and J. Kivilahti, 17-s to 27-s (Jan).
Stainless Steel—Part II, Heat-Affected Zone Cracking in Thick Sections of Austenitic—R. D. Thomas, Jr., 355-s to 368-s (Dec).
Stainless Steel: Part II—Porosity, Cracking and Creep Properties, The Weldability of Nitrogen-Containing Austenitic—T. Ogawa, K. Suzuki, and T. Zaizen, 213-s to 223-s (Jul).
Stainless Steels Brazed with Silver-Base Filler Metals, Effect of Composition on the Corrosion Behavior of—T. Takemoto

and I. Okamoto, 300-s to 307-s (Oct).
Stainless Steel Sheets—Effect of Impurities and Solidification Mode, Weld Discontinuities in Austenitic—V. P. Kujanpää, 369-s to 375-s (Dec).
Stainless Steels, Technical Note: Microstructural Evolution During Inertia Friction Welding of Austenitic—J. C. Lippold and B. C. Odegard, 35-s to 38-s (Jan).
Stainless Steel Strips, Role of Shielding Gases in Flaw Formation in GTAW of Austenitic—V. P. Kujanpää, L. P. Karjalainen and H. A. V. Sikanen, 150-s to 155-s (May).
Stainless Steel Weld Metal Ferrite, Manganese Effect on—E. R. Szumachowski and D. J. Kotecki, 156-s to 161-s (May).
Stainless Steel Welds, The Solidification and Aging Behavior of Types 308 and 308CRE—J. M. Vitek and S. A. David, 246-s to 253-s (Aug).
Steel Pipes, A Parametric Study of Inertia Friction Welding for Low Alloy—M. D. Tumuluru, 289-s to 294-s (Sep).
Steel Plate, Comparison of Hydrogen Assisted Cracking Susceptibility of Cast and Rolled HY-130—K. D. Challenger and B. J. Mason, 39-s to 46-s (Feb).
Steels, The Analysis of Inclusions in Submerged Arc Welds in Microalloyed—A. R. Bhatti, M. E. Saggese, D. N. Hawkins, J. A. Whiteman and M. S. Golding, 224-s to 230-s (Jul).
Steel Submerged Arc Weld Metal Properties, Effect of Aluminum on C-Mn-Nb—H. Terashima and P. H. M. Hart, 173-s to 183-s (Jun).
Steels, Weldability Considerations in the Development of High-Strength Sheet—J. M. Sawhill, Jr., and S. T. Furr, 203-s to 212-s (Jul).
Steel to Enhance Safety and Economy, Matching Ferritic Consumable Welding of 9% Nickel—F. Koshiga, J. Tanaka, I. Watanabe, and T. Takamura, 105-s to 115-s (Apr).
Steel Weldments, Analytical Modeling of Thermal Stress Relieving in Stainless and High Strength—J. E. Agapakis and K. Masubuchi, 187-s to 196-s (Jun).
Steel Weld Metals, Fracture Toughness of HY-130—D. F. Hasson, C. A. Zanis and D. R. Anderson, 197-s to 202-s (Jun).
Stress Relieving in Stainless and High Strength Steel Weldments, Analytical Modeling of Thermal—J. E. Agapakis and K. Masubuchi, 187-s to 196-s (Jun).
Study of Aluminum Brazing Filler Metals Using Hot Stage Scanning Electron Microscopy—B. McGurran and M. G. Nicholas, 295-s to 299-s (Oct).
Study of the Mechanical Properties of Cast-to-Wrought Aluminum Welds—S. P. Sunday and D. D. Rager, 47-s to 57-s (Feb).
Submerged Arc Weld Metal Properties, Effect of Aluminum on C-Mn-Nb Steel—H. Terashima and P. H. M. Hart, 173-s to 183-s (Jun).
Submerged Arc Welds in Microalloyed Steels, The Analysis of Inclusions in—A. R. Bhatti, M. E. Saggese, D. N. Hawkins, J. A. Whiteman and M. A. Golding, 224-s to 230-s (Jul).
Sulfide Shape Controlled Linepipe and HSLA Steels, The Weldability of—G. A. Ratz, E. F. Nippes, J. Mathew, and W. H. Baek, 333-s to 338-s (Nov).

Technical Note: Microstructural Evolution During Inertia Friction Welding of Austenitic Stainless Steels—J. C. Lippold and B. C. Odegard, 35-s to 38-s (Jan).
Temperature Curves for Selected Metal/Metal Oxide Systems in Hydrogen Atmospheres, Dew Point—M. C. Rey, D. P. Kramer, W. R. Henderson and L. D. Abney, 162-s to 166-s (May).
Tensile and Fracture Toughness of Alloy 718 Weldments, Effect of Heat Treatment on the—W. J. Mills, 237-s to 245-s (Aug).
T-Joints, Significance of Weld Undercut in Design of Fillet Welded—C.-L. Tsai and M.-J. Tsai (Feb).
Toughness and Fatigue Properties, Electron Beam Welding of C/Mn Steels—S. Elliott, 9-s to 16-s (Jan).

Ultrasonic Measurement of Weld Penetration—D. E. Hardt and J. M. Katz, 273-s to 281-s (Sep).
Undercut in Design of Fillet Welded T-Joints, Significance of Weld—C.-L. Tsai and M.-J. Tsai (Feb).
Use of Electrodeposited Silver as an Aid in Diffusion Welding—J. W. Dini, W. K. Kelley, W. C. Cowden and E. M. Lopez, 28-s to 34-s (Jan).

Weldability Considerations in the Development of High-Strength Sheet Steels—J. M. Sawhill, Jr., and S. T. Furr, 203-s to 212-s (Jul).
Weldability of Nitrogen-Containing Austenitic Stainless Steel: Part II—Porosity, Cracking and Creep Properties—T. Ogawa, K. Suzuki, and T. Zaizen, 213-s to 223-s (Jul).
Weldability of Sulfide Shape Controlled Linepipe and HSLA Steels—G. A. Ratz, E. F. Nippes, J. Mathew, and W. H. Baek, 333-s to 338-s (Nov).
Weld Discontinuities in Austenitic Stainless Steel Sheets—Effect of Impurities and Solidification Mode—V. P. Kujanpää, 369-s to 375-s (Dec).
Welding of Aluminum Alloy Sheet, The Influence of External Local Heating in Preventing Cracking During—I. E. Hernandez and T. H. North, 84-s to 90-s (Mar).
Welding of C/Mn Steels—Toughness and Fatigue Properties, Electron Beam—S. Elliott, 9-s to 16-s (Jan).
Welding of 9% Nickel Steel to Enhance Safety and Economy, Matching Ferritic Consumable—F. Koshiga, J. Tanaka, I. Watanabe, and T. Takamura, 105-s to 115-s (Apr).
Weld Metal, A Prediction Diagram For Preventing Hydrogen-Assisted Cracking in—N. G. Alcantara and J. H. Rogerson, 116-s to 122-s (Apr).
Weld Metal, Chi-Phase Formation During Solidification and Cooling of CF-8M—M. J. Cieslak, A. M. Ritter, and W. F. Savage, 133-s to 140-s (Apr).
Weld Metal Ferrite, Manganese Effect on Stainless Steel—E. R. Szumachowski and D. J. Kotecki, 156-s to 161-s (May).
Weld Metal for Dissimilar Metal Welding, An Evaluation of Austenitic Fe-Mn-Ni—J. A. Self, D. K. Matlock, and D. L. Olson, 282-s to 288-s (Sep).
Weld Penetration, Ultrasonic Measurement of—D. E. Hardt and J. M. Katz, 273-s to 281-s (Sep).
Wettability Problems When Brazing Cemented Carbides, An Explanation of—K. A. Thorsen, H. Fordsmand, and P. L. Praestgaard, 308-s to 315-s (Oct).

AUTHOR INDEX

Abney, L. D., Rey, M. C., Kramer, D. P., and Henderson, W. R.—Dew Point/Temperature Curves for Selected Metal/Metal Oxide Systems in Hydrogen Atmospheres, 162-s to 166-s (May).
Agapakis, J. E. and Masubuchi, K.—Analytical Modeling of Thermal Stress Relieving in Stainless and High Strength Steel

Weldments, 187-s to 196-s (Jun).
Aidun, D. K. and Savage, W. F.—Optimizing Repair Welding Techniques in Cast Steels, 345-s to 353-s (Nov).
Alcantara, N. G. and Rogerson, J. H.—A Prediction Diagram For Preventing Hydrogen-Assisted Cracking in Weld Metal, 116-s to 122-s (Apr).
Anderson, D. R., Bell, R. A., and Lippold, J. C.—An Evaluation of Copper-Stainless Steel Inertia Friction Welds, 325-s to 332-s (Nov).
Anderson, D. R., Hasson, D. F. and Zanis, C. A.—Fracture Toughness of HY-130 Steel Weld Metals, 197-s to 202-s (Jun).

Baek, W. H., Ratz, G. A., Nippes, E. F., and Mathew, J.—The Weldability of Sulfide Shape Controlled Linepipe and HSLA Steels, 333-s to 338-s (Nov).
Baker, R. S., Tandon, R. K., Ellis, J., and Crisp, P. T.—Fume Generation and Melting Rates of Shielded Metal Arc Welding Electrodes, 262-s to 266-s (Aug).
Bell, R. A., Lippold, J. C., and Anderson, D. R.—An Evaluation of Copper Stainless-Steel Inertia Friction Welds, 325-s to 332-s (Nov).
Bhatti, R., Saggese, M. E., Hawkins, D. N., Whiteman, J. A., and Golding, M. S.—The Analysis of Inclusions in Submerged Arc Welds in Microalloyed Steels, 224-s to 230-s (Jul).
Blind, D., Kussmaul, K., Deimel, P., and Gaudig, W.—Mechanical Properties and Structure of Electron Beam Welds in Alloy Fe-0.2%C-12%Cr-1%Mo, 267-s to 272-s (Sept).
Brooks, J. A., Thompson, A. W. and Williams, J. C.—A Fundamental Study of the Beneficial Effects of Delta Ferrite in Reducing Weld Cracking, 71-s to 83-s (Mar).
Brucker, R. B., Challenger, K. D., Elger, W. M. and Sorek, M. J.—Microstructure-Thermal History Correlations for HY-130 Thick Section Weldments, 254-s to 262-s (Aug).

Challenger, K. D. and Mason, B. J.—Comparison of Hydrogen Assisted Cracking Susceptibility of Cast and Rolled HY-130 Steel Plate, 39-s to 46-s (Feb).
Challenger, K. D., Brucker, R. B., Elger, W. M. and Sorek, M. J.—Microstructure-Thermal History Correlations for HY-130 Thick Section Weldments, 254-s to 262-s (Aug).
Cieslak, M. J., Ritter, A. M., and Savage, W. F.—Chi-Phase Formation During Solidification and Cooling of CF-8M Weld Metal, 133-s to 140-s (Apr).
Cowden, W. C., Dini, J. W., Kelley, W. K., and Lopez, E. M.—Use of Electrodeposited Silver as an Aid in Diffusion Welding, 28-s to 34-s (Jan).
Cox, E. P. and Lamba, H. S.—Cluster Porosity Effects on Transverse Fillet Weld Strength, 1-s to 8-s (Jan).
Crisp, P. T., Tandon, R. K., Ellis, J., and Baker, R. S.—Fume Generation and Melting Rates of Shielded Metal Arc Welding Electrodes, 262-s to 266-s (Aug).

David, S. A. and Vitek, J. M.—The Solidification and Aging Behavior of Types 308 and 308CRE Stainless Steel Welds, 246-s to 253-s (Aug).
Deimel, P., Kussmaul, K., Blind, D., and Gaudig, W.—Mechanical Properties and Structure of Electron Beam Welds in Alloy Fe-0.2%C-12%Cr-1%Mo, 267-s to 272-s (Sept).
Dini, J. W., Kelley, W. K., Cowden, W. C., and Lopez, E. M.—Use of Electrodeposited Silver as an Aid in Diffusion Welding, 28-s to 34-s (Jan).

Elger, W. M., Challenger, K. D., Brucker, R. B., and Sorek, M. J.—Microstructure-Thermal History Correlations for HY-130 Thick Section Weldments, 254-s to 262-s (Aug).
Elliott, S.—Electron Beam Welding of C/Mn Steels—Toughness and Fatigue Properties, 9-s to 16-s (Jan).
Ellis, J., Tandon, R. K., Crisp, P. T., and Baker, R. S.—Fume Generation and Melting Rates of Shielded Metal Arc Welding Electrodes, 262-s to 266-s (Aug).

Fordsmand, H., Thorsen, K. A., and Praestgaard, P. L.—An Explanation of Wettability Problems When Brazing Cemented Carbides, 308-s to 315-s (Oct).
Fordsmand, H., Thorsen, K. A., and Praestgaard, P. L.—Optical Hot Stage Microscopy for Brazing Investigations, 339-s to 344-s (Nov).
French, I. E.—Effects of Electrode Extension on Deposit Characteristics and Metal Transfer of E70T-4 Electrodes, 167-s to 172-s (Jun).
Friedman, E. and Glickstein, S. S.—Weld Modeling Applications, 38 to 42 (Sept).
Furr, S. T. and Sawhill, Jr., J. M.—Weldability Considerations in the Development of High-Strength Sheet Steels, 203-s to 212-s (Jul).

Gaudig, W., Kussmaul, K., Blind, D., and Deimel, P.—Mechanical Properties and Structure of Electron Beam Welds in Alloy Fe-0.2%C-12%Cr-1%Mo, 267-s to 272-s (Sept).
Giedt, W. H., Wei, X.-C., and Wei, S.-R.—Effect of Surface Convection on Stationary GTA Weld Zone Temperatures, 376-s to 383-s (Dec).
Glickstein, S. S. and Friedman, E.—Weld Modeling Applications, 38 to 42 (Sept).
Golding, M. S., Bhatti, R., Saggese, M. E., Hawkins, D. N., and Whiteman, J. A.—The Analysis of Inclusions in Submerged Arc Welds in Microalloyed Steels, 224-s to 230-s (Jul).

Hanninen, H., Klemetti, K., and Kivilahti, J.—The Effect of Sigma Phase Formation on the Corrosion and Mechanical Properties of Nb-Stabilized Stainless Steel Cladding, 17-s to 27-s (Jan).
Hardt, D. E. and Katz, J. M.—Ultrasonic Measurement of Weld Penetration, 273-s to 281-s (Sep).
Hart, P. H. M. and Terashima, M.—Effect of Aluminum on C-Mn-Nb Steel Submerged Arc Weld Metal Properties, 173-s to 183-s (Jun).
Hasson, D. F., Zanis, C. A. and Anderson, D. R.—Fracture Toughness of HY-130 Steel Weld Metals, 197-s to 202-s (Jun).
Hawkins, D. N., Bhatti, R., Saggese, M. E., Whiteman, J. A., and Golding, M. S.—The Analysis of Inclusions in Submerged Arc Welds in Microalloyed Steels, 224-s to 230-s (Jul).
Henderson, W. R., Rey, M. C., Kramer, D. P., and Abney, L. D.—Dew Point/Temperature Curves for Selected Metal/Metal Oxide Systems in Hydrogen Atmospheres, 162-s to 166-s (May).
Hernandez, I. E. and North, T. H.—The Influence of External Local Heating in Preventing Cracking During Welding of Aluminum Alloy Sheet, 84-s to 90-s (Mar).
Hicho, G. E., Kasen, M. B., and Placious, R. C.—Inherent Through-Wall Depth Limitations on Blunt Discontinuities in Welds, 184-s to 186-s (Jun).

Kane, J. J. and Savage, E. I.—Microstructural Characterization of Nickel Braze Joints as a Function of Thermal Exposure, 316-s to 323-s (Oct).
Karjalainen, L. P., Kujanpää, V. P., and Sikanen, H. A. V.—Role of Shielding Gases in Flaw Formation in GTAW of Austenitic Stainless Steel Strips, 151-s to 155-s (May).
Kasen, M. B., Hicho, G. E., and Placious, R. C.—Inherent Through-Wall Depth Limitations on Blunt Discontinuities in Welds, 184-s to 186-s (Jun).
Katz, J. M. and Hardt, D. E.—Ultrasonic Measurement of Weld Penetration, 273-s to 281-s (Sep).
Kelley, W. K., Dini, J. W., Cowden, W. C., and Lopez, E. M.—Use of Electrodeposited Silver as an Aid in Diffusion

Welding, 28-s to 34-s (Jan).
Kimchi, M. — Spot Weld Properties When Welding With Expulsion, 58-s to 63-s (Feb).
Kivilahti, J., Klemetti, K., and Hanninen, H. — The Effect of Sigma Phase Formation on the Corrosion and Mechanical Properties of Nb-Stabilized Stainless Steel Cladding, 17-s to 27-s (Jan).
Klemetti, K., Hanninen, H., and Kivilahti, J. — The Effect of Sigma Phase Formation on the Corrosion and Mechanical Properties of Nb-Stabilized Stainless Steel Cladding, 17-s to 27-s (Jan).
Koshiga, F., Tanaka, J., Watanabe, I., and Takamura, T. — Matching Ferritic Consumable Welding of 9% Nickel Steel to Enhance Safety and Economy, 105-s to 115-s (Apr).
Kotecki, D. J. and Szumachowski, E. R. — Manganese Effect on Stainless Steel Weld Metal Ferrite, 156-s to 161-s (May).
Kramer, D. P., Rey, M. C., Henderson, W. R., and Abney, L. D. — Dew Point/Temperature Curves for Selected Metal/Metal Oxide Systems in Hydrogen Atmospheres, 162-s to 166-s (May).
Kujanpää, V. P., Karjalainen, L. P., and Sikanen, H. A. V. — Role of Shielding Gases in Flaw Formation in GTAW of Austenitic Stainless Steel Strips, 151-s to 155-s (May).
Kujanpää, V. P. — Weld Discontinuities in Austenitic Stainless Steel Sheets — Effect of Impurities and Solidification Mode, 369-s to 375-s (Dec).
Kussmaul, K., Blind, D., Deimel, P., and Gaudig, W. — Mechanical Properties and Structure of Electron Beam Welds in Alloy Fe-0.2%C-12%Cr-1%Mo, 267-s to 272-s (Sept).

Lamba, H. S. and Cox, E. P. — Cluster Porosity Effects on Transverse Fillet Weld Strength, 1-s to 8-s (Jan).
Lippold, J. C. and Odegard, B. C. — Technical Note: Microstructural Evolution During Inertia Friction Welding of Austenitic Stainless Steels, 35-s to 38-s (Jan).
Lippold, J. C. — An Investigation of Weld Cracking in Alloy 800, 91-s to 104-s (Mar).
Lippold, J. C., Bell, R. A., and Anderson, D. R. — An Evaluation of Copper-Stainless Steel Inertia Friction Welds, 325-s to 332-s (Nov).
Lopez, E. M., Dini, J. W., Kelley, W. K., and Cowden, W. C. — Use of Electrodeposited Silver as an Aid in Diffusion Welding, 28-s to 34-s (Jan).

Mason, B. J. and Challenger, K. D. — Comparison of Hydrogen Assisted Cracking Susceptibility of Cast and Rolled HY-130 Steel Plate, 39-s to 46-s (Feb).
Masubuchi, K. and Agapakis, J. E. — Analytical Modeling of Thermal Stress Relieving in Stainless and High Strength Steel Weldments, 187-s to 196-s (Jun).
Mathew, J., Ratz, G. A., Nippes, E. F., and Baek, W. H. — The Weldability of Sulfide Shape Controlled Linepipe and HSLA Steels, 333-s to 338-s (Nov).
Matlock, D. K., Self, J. A., and Olson, D. L. — An Evaluation of Austenitic Fe-Mn-Ni Weld Metal for Dissimilar Metal Welding, 282-s to 288-s (Sep).
McGurran, B. and Nicholas, M. G. — A Study of Aluminum Brazing Filler Metals Using Hot Stage Scanning Electron Microscopy, 295-s to 299-s (Oct).
Mills, W. J. — Effect of Heat Treatment on the Tensile and Fracture Toughness of Alloy 718 Weldments, 237-s to 245-s (Aug).

Nicholas, M. G. and McGurran, B. — A Study of Aluminum Brazing Filler Metals Using Hot Stage Scanning Electron Microscopy, 295-s to 299-s (Oct).
Nied, H. A. — The Finite Element Modeling of the Resistance Spot Welding Process, 123-s to 132-s (Apr).
Nippes, E. F., Ratz, G. A., Mathew, J., and Baek, W. H. — The Weldability of Sulfide Shape Controlled Linepipe and HSLA Steels, 333-s to 338-s (Nov).
North, T. H. and Hernandez, I. E. — The Influence of External Local Heating in Preventing Cracking During Welding of Aluminum Alloy Sheet, 84-s to 90-s (Mar).

Odegard, B. C. and Lippold, J. C. — Technical Note: Microstructural Evolution During Inertia Friction Welding of Austenitic Stainless Steels, 35-s to 38-s (Jan).
Ogawa, T., Suzuki, K., and Zaizen, T. — The Weldability of Nitrogen-Containing Austenitic Stainless Steel: Part II — Porosity, Cracking and Creep Properties, 213-s to 223-s (Jul).
Okamoto, I. and Takemoto, T. — Effect of Composition on the Corrosion Behavior of Stainless Steels Brazed with Silver-Base Filler Metals, 300-s to 307-s (Oct).
Olson, D. L., Self, J. A., and Matlock, D. K. — An Evaluation of Austenitic Fe-Mn-Ni Weld Metal for Dissimilar Metal Welding, 282-s to 288-s (Sep).

Placious, R. C., Kasen, M. B. and Hicho, G. E. — Inherent Through-Wall Depth Limitations on Blunt Discontinuities in Welds, 184-s to 186-s (Jun).
Praestgaard, P. L., Thorsen, K. A., and Fordsmand, H. — An Explanation of Wettability Problems When Brazing Cemented Carbides, 308-s to 315-s (Oct).
Praestgaard, P. L., Thorsen, K. A., and Fordsmand, H. — Optical Hot Stage Microscopy for Brazing Investigations, 345-s to 353-s (Nov).
Prasad Rao, K. and Prasannakumar, S. — Assessment Criterion for Variability of Delta Ferrite in Austenitic Weld and Clad Metals, 231-s to 236-s (Jul).
Prasannakumar, S. and Prasad Rao, K. — Assessment Criterion for Variability of Delta Ferrite in Austenitic Weld and Clad Metals, 231-s to 236-s (Jul).

Quintana, M. A. — A Critical Evaluation of the Glycerin Test, 141-s to 150-s (May).

Rager, D. D. and Sunday, S. P. — A Study of the Mechanical Properties of Cast-to-Wrought Aluminum Welds, 47-s to 57-s (Feb).
Ratz, G. A., Nippes, E. F., Mathew, J., and Baek, W. H. — The Weldability of Sulfide Shape Controlled Linepipe and HSLA Steels, 333-s to 338-s (Nov).
Rey, M. C., Kramer, D. P., Henderson, W. R., and Abney, L. D. — Dew Point/Temperature Curves for Selected Metal/Metal Oxide Systems in Hydrogen Atmospheres, 162-s to 166-s (May).
Ritter, A. M., Cieslak, M. J. and Savage, W. F. — Chi-Phase Formation During Solidification and Cooling of CF-8M Weld Metal, 133-s to 140-s (Apr).
Rogerson, J. H. and Alcantara, N. G. — A Prediction Diagram For Preventing Hydrogen-Assisted Cracking in Weld Metal, 116-s to 122-s (Apr).

Saggese, M. E., Bhatti, R., Hawkins, D. N., Whiteman, J. A., and Golding, M. S. — The Analysis of Inclusions in Submerged Arc Welds in Microalloyed Steels, 224-s to 230-s (Jul).
Savage, E. I. and Kane, J. J. — Microstructural Characterization of Nickel Braze Joints as a Function of Thermal Exposure, 316-s to 323-s (Oct).
Savage, W. F., Cieslak, M. J. and Ritter, A. M. — Chi-Phase Formation During Solidification and Cooling of CF-8M Weld Metal, 133-s to 140-s (Apr).
Sawhill, Jr., J. M. and Furr, S. T. — Weldability Considerations in the Development of High-Strength Sheet Steels, 203-s to 212-s (Jul).

Self, J. A., Matlock, D. K., and Olson, D. L.—An Evaluation of Austenitic Fe-Mn-Ni Weld Metal for Dissimilar Metal Welding, 282-s to 294-s (Sep).
Sikanen, H. A. V., Kujanpää, V. P., and Karjalainen, L. P.—Role of Shielding Gases in Flaw Formation in GTAW of Austenitic Stainless Steel Strips, 151-s to 155-s (May).
Sorek, M. J., Challenger, K. D., Brucker, R. B., and Elger, W. M.—Microstructure-Thermal History Correlations for HY-130 Thick Section Weldments, 254-s to 262-s (Aug).
Sunday, S. P. and Rager, D. D.—A Study of the Mechanical Properties of Cast-to-Wrought Aluminum Welds, 47-s to 57-s (Feb).
Suzuki, K., Ogawa, T., and Zaizen, T.—The Weldability of Nitrogen-Containing Austenitic Stainless Steel: Part II—Porosity, Cracking and Creep Properties, 213-s to 223-s (Jul).
Szumachowski, E. R. and Kotecki, D. J.—Manganese Effect on Stainless Steel Weld Metal Ferrite, 156-s to 161-s (May).

Takamura, T., Koshiga, F., Tanaka, J., and Watanabe, I.—Matching Ferritic Consumable Welding of 9% Nickel Steel to Enhance Safety and Economy, 105-s to 115-s (Apr).
Takemoto, T. and Okamoto, I.—Effects of Composition on the Corrosion Behavior of Stainless Steels Brazed with Silver-Base Filler Metals, 300-s to 307-s (Oct).
Tanaka, J., Koshiga, F., Watanabe, I., and Takamura, T.—Matching Ferritic Consumable Welding of 9% Nickel Steel to Enhance Safety and Economy, 105-s to 115-s (Apr).
Tandon, R. K., Ellis, J., Crisp, P. T., and Baker, R. S.—Fume Generation and Melting Rates of Shielded Metal Arc Welding Electrodes, 262-s to 266-s (Aug).
Terashima, H. and Hart, P. H. M.—Effect of Aluminum on C-Mn-Nb Steel Submerged Arc Weld Metal Properties, 173-s to 183-s (Jun).
Thomas, Jr., R. D.—Heat-Affected Zone Cracking in Thick Sections of Austenitic Stainless Steels—Part II, 355-s to 368-s (Dec).
Thompson, A. W., Brooks, J. A., and Williams, J. C.—A Fundamental Study of the Beneficial Effects of Delta Ferrite in Reducing Weld Cracking, 71-s to 83-s (Mar).
Thorsen, K. A., Fordsmand, H., and Praestgaard, P. L.—An Explanation of Wettability Problems When Brazing Cemented Carbides, 308-s to 315-s (Oct).
Thorsen, K. A., Fordsmand, H., and Praestgaard, P. L.—Optical Hot Stage Microscopy for Brazing Investigations, 339-s to 344-s (Nov).
Tsai, C. -L. and Tsai, M. -J.—Significance of Weld Undercut in Design of Fillet Welded T-Joints, 64-s to 70-s (Feb).
Tsai, M. -J. and Tsai, C. -L.—Significance of Weld Undercut in Design of Fillet Welded T-Joints, 64-s to 70-s (Feb).
Tumuluru, M. D.—A Parametric Study of Inertia Friction Welding for Low Alloy Steel Pipes, 289-s to 294-s (Sep).

Vitek, J. M. and David, S. A.—The Solidification and Aging Behavior of Types 308 and 308CRE Stainless Steel Welds, 246-s to 253-s (Aug).

Watanabe, I., Koshiga, F., Tanaka, J., and Takamura, T.—Matching Ferritic Consumable Welding of 9% Nickel Steel to Enhance Safety and Economy, 105-s to 115-s (Apr).
Wei, S.-R., Giedt, W. H., and Wei, X.-C.—Effect of Surface Convection on Stationary GTA Weld Zone Temperatures, 376-s to 383-s (Dec).
Wei, X.-C., Giedt, W. H., and Wei, S.-R.—Effect of Surface Convection on Stationary GTA Weld Zone Temperatures, 376-s to 383-s (Dec).
Whiteman, J. A., Bhatti, R., Saggese, M. E., Hawkins, D. N., and Golding, M. S.—The Analysis of Inclusions in Submerged Arc Welds in Microalloyed Steels, 224-s to 230-s (Jul).
Williams, J. C., Brooks, A. W., and Thompson, J. A.—A Fundamental Study of the Beneficial Effects of Delta Ferrite in Reducing Weld Cracking, 71-s to 83-s (Mar).

Zaizen, T., Ogawa, T., and Suzuki, K.—The Weldability of Nitrogen Containing Austenitic Stainless Steel: Part II—Porosity, Cracking and Creep Properties, 213-s to 223-s (Jul).
Zanis, C. A., Hasson, D. F., and Anderson, D. R.—Fracture Toughness of HY-130 Steel Weld Metals, 197-s to 202-s (Jun).